Generate Collection | Print

Search Results - Record(s) 1 through 18 of 18 returned.

1. 20010031086 . 12 Mar 01. 18 Oct 01. Image processor, image processing apparatus, and image processing method. Hotta, Takashi. 382/209; G06K009/62.

2. 6399953 . 08 Jan 99; 04 Jun 02. Scanning electronic microscope and method for automatically observing semiconductor wafer. Kitamura; Tadashi. 250/491.1; 250/310 250/492.2. H01J037/28.

3. 6285780 . 27 Mar 98; 04 Sep 01. Apparatus for identifying individual animals and image processing method. Yamakita; Osamu, et al. 382/110; 382/117. G06K009/00.

4. 6249608 . 19 Dec 97; 19 Jun 01. Template matching image processor utilizing sub image pixel sums and sum of squares thresholding. Ikeda; Mitsuji, et al. 382/209; 382/270. G06K009/62 G06K009/38.

5. 6167201 . 30 Jul 97; 26 Dec 00. Camera having a power zoom function. Hara; Yoshihiro, et al. 396/77; 396/72. G03B017/00.

6. 6115104 . 02 Sep 98; 05 Sep 00. Image processing using parameters related to image input and output devices. Nakatsuka; Kimihiro. 355/40; 355/18. G03B027/52 G03B027/00.

7. 6061465 . 29 Aug 97; 09 May 00. Radiation image processing method and apparatus. Nakajima; Nobuyoshi. 382/132;. G06K009/00.

8. 6021216 . 06 Jan 99; 01 Feb 00. Reduction of noise visibility in a digital video system. Sathe; Vinay, et al. 382/166; 382/233 382/248 382/274. G06K009/00 G06K009/36.

9. 5909249 . 15 Dec 95; 01 Jun 99. Reduction of noise visibility in a digital video system. Sathe; Vinay, et al. 375/240.18; 348/25 348/28 375/240.24 382/260 382/261. H04N007/18.

10. 5842194 . 28 Jul 95; 24 Nov 98. Method of recognizing images of faces or general images using fuzzy combination of multiple resolutions. Arbuckle; Thomas D.. 706/52; 382/224 706/2. G06F015/18.

11. 5697000 . 01 Aug 94; 09 Dec 97. Camera having a power zoom function. Hara; Yoshihiro, et al. 396/77; 396/72. G03B001/18 G03B007/00.

12. 5231494 . 08 Oct 91; 27 Jul 93. Selection of compressed television signals from single channel allocation based on viewer characteristics. Wachob; David E.. 348/385.1; 348/473 725/138 725/139 725/35. H04N007/04 H04N007/10.

13. 5079621 . 29 Jun 90; 07 Jan 92. DCT transform compression, transmission and recovery of digital color using virtual filtering mechanism. Daly; Scott J., et al. 348/396.1;. H04N007/133 H04N011/02 H04N011/04.

14. JP 2000152241 A . 04 Nov 99. 30 May 00. METHOD AND DEVICE FOR RESTORING COMPRESSED MOVING IMAGE FOR REMOVING BLOCKING AND RING EFFECTS. MIN, CHORU HONGU. H04N007/30; H04N001/41 H04N005/92.

15. JP 09135383 A . 09 Nov 95. 20 May 97. METHOD FOR MEASURING VISUAL FIELD BY IMAGE PROCESSING AND ITS DEVICE. NOGUCHI, KENJI, et al. H04N005/238; H04N005/225.

16. JP 09042915 A . 31 Jul 95. 14 Feb 97. HOLE POSITION DETECTING DEVICE. KENMOCHI, KEIICHI. G01B011/00; B23Q017/24 G05D003/12 G06T001/00 G06T009/20.

17. KR 304897 B, JP 2000152241 A, KR 2000031053 A, KR 2001009660 A, KR 287529 B . Decompression procedure for moving image, involves converting normalization parameter into analogous parameter using compressed pixel for obtaining decompression pixel.. CHOI, T E, et al. H04N001/41 H04N005/92 H04N007/24 H04N007/26 H04N007/30.

☐ 18. JP 11352617 A. Image normalization processing apparatus in radiation image information reader for diagnosing lesion or trauma - has image acceptance unit which performs normalization of image data received from reading side after determining normalization process conditions. G03B042/02 G06T001/00 H04N001/407.

Generate Collection | Print

Term	Documents
IMAG$3	0
IMAG.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	881
IMAGA.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	20
IMAGAE.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	13
IMAGAES.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	4
IMAGAGE.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	4
IMAGAKI.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	39
IMAGAMA.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	33
IMAGAMI.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	19
IMAGANT.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	1
IMAGAR.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	1
(IMAG$3 WITH ((PROCESS$3 OR SYSTEM OR MEANS OR METHOD) NEAR2 NORMALIZ$7 NEAR2 (CONDITION$3 OR CRITERION$3 OR COEFFICIENT$3 OR PARAMETER$3))).USPT,PGPB,JPAB,EPAB,DWPI,TDBD.	18

There are more results than shown above. Click here to view the entire set.

Previous Page Next Page

WEST

Generate Collection Print

Search Results - Record(s) 1 through 18 of 18 returned.

1. Document ID: US 20010031086 A1

L3: Entry 1 of 18 File: PGPB Oct 18, 2001

DOCUMENT-IDENTIFIER: US 20010031086 A1
TITLE: Image processor, image processing apparatus, and image processing method

Summary of Invention Paragraph (5):
[0005] In performing template matching, the above-described normalized correlation coefficient is obtained for each of a plurality of sub-images, and one or plural sub-images which are determined to resemble a template are selected in accordance with the obtained normalized correlation coefficients. A method using a normalized correlation coefficient can perform template matching without receiving effects of variations between image data values of pixels in a template image and those of pixels in a search image, the variation being caused, for example, by changes in lighting.

Summary of Invention Paragraph (7):
[0007] In one of existing methods for performing a template matching method at a high speed, absolute values of differences between image data values of pixels in a template image and those of pixels in a sub-image to be processed, of a search image, are accumulated while a normalized correlation coefficient is obtained for the sub-image, and the process for calculating the normalized correlation coefficient is closed, if a sum of the accumulated absolute values exceeds a preset threshold value.

Summary of Invention Paragraph (8):
[0008] In the above-mentioned existing measure, since the accumulated sum of absolute values of differences between image data values of pixels in a template image and those of pixels in a sub-image to be processed is used to close a process for obtaining a normalized correlation coefficient, there exists a problem in which if variations of image data values of pixels in a template image and those of pixels in a sub-image of a search image are caused, for example, by changes in lighting, a process for obtaining a normalized correlation coefficient is wrongly closed for even a sub-image which has a high similarity to the template image because of the large accumulated sum of absolute value of the differences. In the following, this problem will be explained in detail with reference to FIG. 13 and FIG. 14.

Summary of Invention Paragraph (9):
[0009] FIG. 13 is an example of a template image, and FIG. 14 is an example of a search image for which a sub-image resembling the template image is searched. In these figures, squares shows pixels, and values shown in the squares indicate levels in gradation of images. The similarity between two images is to be determined, not based on the nearness between absolute image data values of pixels in the two images, but on the nearness between relative local changing tendencies in image data values of pixels in the two images. Therefore, a sub-image, in the search image shown in FIG. 14, most resembling the template image shown in FIG. 13, is a sub-image shown at the right-upper part in FIG. 14, which are composed of pixels 1403, 1404, 1405, 1408, 1409, 1410, 1413, 1414 and 1415. In fact, a normalized correlation coefficient between the template image and the sub-image is 1.0. However, the value in a accumulated sum of absolute values of difference between image data values, which is used to close a process for obtaining a normalized correlation coefficient in the existing methods, is 360 for the sub-image at the right-upper part, and is much larger than 80 for a sub-image at the left-lower part, which is composed of pixels 1411, 1412, 1413, 1416, 1417, 1418, 1421, 1422 and 1423.

Therefore, if a threshold value of the accumulated sum, which is set to close a process for obtaining a normalized correlation coefficient, is preset to a value in a range 80 to 460, the sub-image at the left-lower part is searched, but searching the sub-image at the right-upper part is closed in the midst. Hereupon, the sub-image at the left-lower part is an image of a laterally striped pattern.

Detail Description Paragraph (16):
[0075] The above explanation is as to a pre-processing, and in the pre-processing according to the present invention, it is possible to obtain a sum, and a sum of squares, of image data values for each of the template image and the search image by using image data which are obtained by scanning the respective template and search images at one time. Next, a process for obtaining a normalized correlation coefficient is executed for a sub-image to be processed. In the process, at first, a sub-image corresponding to a starting point (0, 0) is selected (step 106), and a threshold value F (0, 0) for closing a process for evaluating a similarity of the sub-image is obtained, based on the following equation 3 step 107). 2 F (i , j) = B + D (i , j) - 2 AC (i , j) P - 2 E B - A 2 P D (i , j) - (C (i , j)) 2 P , (3)

Detail Description Paragraph (50):
[0109] The above-mentioned processing is a pre-processing in a process for obtaining a normalized correlation coefficient between a sub-image to be processed and the template image. In the process for obtaining a normalized correlation coefficient, image data are read out one by one for each pixel of the template image from the image memory 1703, and for each pixel of a sub-image to be processed from the image memory 1704. Furthermore, cumulative addition is performed for a square of each difference between an image data value of each pixel in the processed sub-image and that of a corresponding pixel in the template image, and the result of cumulative addition is stored in the register 914. The comparator 923 compares the result of cumulative addition, which is stored in the register 914, with the threshold value stored in the register 922, and outputs a signal corresponding to the result of the comparison. Hereupon, if the result of cumulative addition, which is stored in the register 914, exceeds the threshold value stored in the register 922, a sum, and a sum of squares, of image data values of pixels in the next sub-image neighboring the present sub-image are stored in the registers 919 and 920, respectively. Furthermore, a threshold value used for closing a process for evaluation of a similarity for the next sub-image is stored in the register 922, and the addresses stored in the address generators 903 and 904 are changed to the address of the starting pixel in the template image and an address of a starting pixel in the next sub-image, respectively. At the same time, the changes of the addresses in the address generators 903 and 904 are informed to CPU 1701.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

2. Document ID: US 6399953 B1

L3: Entry 2 of 18 File: USPT Jun 4, 2002

DOCUMENT-IDENTIFIER: US 6399953 B1
TITLE: Scanning electronic microscope and method for automatically observing semiconductor wafer

Brief Summary Paragraph Right (16):
The matching mentioned here is a method for finding a normalized correlation coefficient for overlaps between images obtained by shifting the images acquired at (C5) and the images acquired at (G2) and for finding an amount of shift which maximizes that value.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

3. Document ID: US 6285780 B1

L3: Entry 3 of 18 File: USPT Sep 4, 2001

DOCUMENT-IDENTIFIER: US 6285780 B1
TITLE: Apparatus for identifying individual animals and image processing method

Detailed Description Paragraph Right (31):
FIG. 5 is an operation flowchart of the process of measuring normalizing parameters from an image of the iridial granule in the geometric normalizer 3.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

4. Document ID: US 6249608 B1

L3: Entry 4 of 18 File: USPT Jun 19, 2001

DOCUMENT-IDENTIFIER: US 6249608 B1
TITLE: Template matching image processor utilizing sub image pixel sums and sum of squares thresholding

Brief Summary Paragraph Right (5):
In performing template matching, the above-described normalized correlation coefficient is obtained for each of a plurality of sub-images, and one or plural sub-images which are determined to resemble a template are selected in accordance with the obtained normalized correlation coefficients. A method using a normalized correlation coefficient can perform template matching without receiving effects of variations between image data values of pixels in a template image and those of pixels in a search image, the variation being caused, for example, by changes in lighting.

Brief Summary Paragraph Right (7):
In one of existing methods for performing a template matching method at a high speed, absolute values of differences between image data values of pixels in a template image and those of pixels in a sub-image to be processed, of a search image, are accumulated while a normalized correlation coefficient is obtained for the sub-image, and the process for calculating the normalized correlation coefficient is closed, if a sum of the accumulated absolute values exceeds a preset threshold value.

Brief Summary Paragraph Right (8):
In the above-mentioned existing measure, since the accumulated sum of absolute values of differences between image data values of pixels in a template image and those of pixels in a sub-image to be processed is used to close a process for obtaining a normalized correlation coefficient, there exists a problem in which if variations of image data values of pixels in a template image and those of pixels in a sub-image of a search image are caused, for example, by changes in lighting, a process for obtaining a normalized correlation coefficient is wrongly closed for even a sub-image which has a high similarity to the template image because of the large accumulated sum of absolute value of the differences. In the following, this problem will be explained in detail with reference to FIG. 13 and FIG. 14.

Brief Summary Paragraph Right (9):
FIG. 13 is an example of a template image, and FIG. 14 is an example of a search image for which a sub-image resembling the template image is searched. In these figures, squares shows pixels, and values shown in the squares indicate levels in

gradation of images. The similarity between two images is to be determined, not based on the nearness between absolute image data values of pixels in the two images, but on the nearness between relative local changing tendencies in image data values of pixels in the two images. Therefore, a sub-image, in the search image shown in FIG. 14, most resembling the template image shown in FIG. 13, is a sub-image shown at the right-upper part in FIG. 14, which are composed of pixels 1403, 1404, 1405, 1408, 1409, 1410, 1413, 1414 and 1415. In fact, a normalized correlation coefficient between the template image and the sub-image is 1.0. However, the value in a accumulated sum of absolute values of difference between image data values, which is used to close a process for obtaining a normalized correlation coefficient in the existing methods, is 360 for the sub-image at the right-upper part, and is much larger than 80 for a sub-image at the left-lower part, which is composed of pixels 1411, 1412, 1413, 1416, 1417, 1418, 1421, 1422 and 1423. Therefore, if a threshold value of the accumulated sum, which is set to close a process for obtaining a normalized correlation coefficient, is preset to a value in a range 80 to 460, the sub-image at the left-lower part is searched, but searching the sub-image at the right-upper part is closed in the midst. Hereupon, the sub-image at the left-lower part is an image of a laterally striped pattern.

Detailed Description Paragraph Right (12):
The above explanation is as to a pre-processing, and in the pre-processing according to the present invention, it is possible to obtain a sum, and a sum of squares, of image data values for each of the template image and the search image by using image data which are obtained by scanning the respective template and search images at one time. Next, a process for obtaining a normalized correlation coefficient is executed for a sub-image to be processed. In the process, at first, a sub-image corresponding to a starting point (0, 0) is selected (step 106), and a threshold value F (0, 0) for closing a process for evaluating a similarity of the sub-image is obtained, based on the following equation 3 (step 107). ##EQU2##

Detailed Description Paragraph Right (30):
The above-mentioned processing is a pre-processing in a process for obtaining a normalized correlation coefficient between a sub-image to be processed and the template image. In the process for obtaining a normalized correlation coefficient, image data are read out one by one for each pixel of the template image from the image memory 1703, and for each pixel of a sub-image to be processed from the image memory 1704. Furthermore, cumulative addition is performed for a square of each difference between an image data value of each pixel in the processed sub-image and that of a corresponding pixel in the template image, and the result of cumulative addition is stored in the register 914. The comparator 923 compares the result of cumulative addition, which is stored in the register 914, with the threshold value stored in the register 922, and outputs a signal corresponding to the result of the comparison. Hereupon, if the result of cumulative addition, which is stored in the register 914, exceeds the threshold value stored in the register 922, a sum, and a sum of squares, of image data values of pixels in the next sub-image neighboring the present sub-image are stored in the registers 919 and 920, respectively. Furthermore, a threshold value used for closing a process for evaluation of a similarity for the next sub-image is stored in the register 922, and the addresses stored in the address generators 903 and 904 are changed to the address of the starting pixel in the template image and an address of a starting pixel in the next sub-image, respectively. At the same time, the changes of the addresses in the address generators 903 and 904 are informed to CPU 1701.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

5. Document ID: US 6167201 A

L3: Entry 5 of 18 File: USPT Dec 26, 2000

DOCUMENT-IDENTIFIER: US 6167201 A
TITLE: Camera having a power zoom function

Detailed Description Paragraph Right (366):
In the normalizing condition setting process, the normalizing constant of the membership function is changed over according to the image plane speed VHOSEI. First, the image plane speed VHOSEI is compared with a predetermined speed V3 (step S400). When the image plane speed VHOSEI is lower than the speed V3, the values C1 and C2 are set to the normalizing constants NORMC1 and NORMC2, respectively, as shown in Table 10 (steps S402 and S404). When the image plane speed VHOSEI is equal to or higher than the speed V3 and lower than a predetermined speed V4, (NO of step S400, YES of step S406), the values C2 and C5 are set to the normalizing constants NORMC1 and NORMC2, respectively, as shown in Table 10 (steps S408 and S410). When the image plane speed is equal to or higher than the speed V4 (NO of step S406), the values C3 and C6 are set to the normalizing constants NORMC1 and NORMC2, respectively, as shown in Table 10 (steps S412 and S414). Then, after the setting of the normalizing constants NORMC1 and NORMC2 are completed, the process returns.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

6. Document ID: US 6115104 A

L3: Entry 6 of 18 File: USPT Sep 5, 2000

DOCUMENT-IDENTIFIER: US 6115104 A
TITLE: Image processing using parameters related to image input and output devices

Detailed Description Paragraph Right (57):
Based on the conditions thus defined, the image processing parameter approximating unit 74 (see FIG. 15) approximates the image processing parameters using fuzzy logic. FIGS. 20(a) through 20(f) show examples of the fuzzy logic in the third embodiment. The abscissa of FIGS. 20(a) through 20(f) indicates either a piece of the image processing control information or an image processing parameter in the normalized scale, whereas the ordinate indicates the compatibility or the membership value.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

7. Document ID: US 6061465 A

L3: Entry 7 of 18 File: USPT May 9, 2000

DOCUMENT-IDENTIFIER: US 6061465 A
TITLE: Radiation image processing method and apparatus

Detailed Description Paragraph Right (33):
The normalizing processing has been proposed by the applicant in, for example, Japanese Patent Publication No. 4(1992)-64223. With the normalizing processing, when the conditions, under which the image processing is to be carried out on a radiation image, are determined, a histogram of the image signal is analyzed, and the image signal is converted into an image signal, which represents image density and gradation suitable for the characteristics of an image reproducing means or an image reproducing medium, in accordance with the results of the analysis of the histogram.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

8. Document ID: US 6021216 A

L3: Entry 8 of 18 File: USPT Feb 1, 2000

DOCUMENT-IDENTIFIER: US 6021216 A
TITLE: Reduction of noise visibility in a digital video system

Brief Summary Paragraph Right (7):
Coefficient quantization, or normalization, is a process that introduces small changes into the image in order to improve coding efficiency. This is done by truncating the DCT coefficients to a fixed number of bits. The truncation can be performed by shifting a coefficient from left to right and spilling the least significant bits off the end of a register holding the coefficient. In this way, the amplitude of the coefficient is also reduced. The number of bits used to represent each of the coefficients in the block of coefficients is assigned individually. The number of bits can be further reduced or increased as necessary to maintain a constant bit rate.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

9. Document ID: US 5909249 A

L3: Entry 9 of 18 File: USPT Jun 1, 1999

DOCUMENT-IDENTIFIER: US 5909249 A
TITLE: Reduction of noise visibility in a digital video system

Brief Summary Paragraph Right (7):
Coefficient quantization, or normalization, is a process that introduces small changes into the image in order to improve coding efficiency. This is done by truncating the DCT coefficients to a fixed number of bits. The truncation can be performed by shifting a coefficient from left to right and spilling the least significant bits off the end of a register holding the coefficient. In this way, the amplitude of the coefficient is also reduced. The number of bits used to represent each of the coefficients in the block of coefficients is assigned individually. The number of bits can be further reduced or increased as necessary to maintain a constant bit rate.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

10. Document ID: US 5842194 A

L3: Entry 10 of 18 File: USPT Nov 24, 1998

DOCUMENT-IDENTIFIER: US 5842194 A
TITLE: Method of recognizing images of faces or general images using fuzzy combination of multiple resolutions

Brief Summary Paragraph Right (38):

The autocorrelation coefficients are calculated by scanning the set of masks shown in FIG. 2 over the gray-scale image to be classified. The areas which are represented by black squares represent pixels whose mask has a numeric value of one whereas those represented by white squares have a mask of zero and are not used in the calculation for that coefficient. For each of the possible positions of the mask on the input image, the product of the image intensities for each of the black squares is calculated and the sum of these intensity products is then normalized so that all possible characterizations lie between zero and one. Thus the zeroth order local autocorrelation coefficient is the normalized mean of the intensity values of the image. The first and second order coefficients give information about the oriented correlations between pixels.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments   KWIC | Draw Desc | Image

11. Document ID: US 5697000 A

L3: Entry 11 of 18 File: USPT Dec 9, 1997

DOCUMENT-IDENTIFIER: US 5697000 A
TITLE: Camera having a power zoom function

Detailed Description Paragraph Right (360):
In the normalizing condition setting process, the normalizing constant of the membership function is changed over according to the image plane speed VHOSEI. First, the image plane speed VHOSEI is compared with a predetermined speed V3 (step S400). When the image plane speed VHOSEI is lower than the speed V3, the values C1 and C2 are set to the normalizing constants NORMC1 and NORMC2, respectively, as shown in Table 10 (steps S402 and S404). When the image plane speed VHOSEI is equal to or higher than the speed V3 and lower than a predetermined speed V4, (NO of step S400, YES of step S406), the values C2 and C5 are set to the normalizing constants NORMC1 and NORMC2, respectively, as shown in Table 10 (steps S408 and S410). When the image plane speed is equal to or higher than the speed V4 (NO of step S406), the values C3 and C6 are set to the normalizing constants NORMC1 and NORMC2, respectively, as shown in Table 10 (steps S412 and S414). Then, after the setting of the normalizing constants NORMC1 and NORMC2 are completed, the process returns.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments   KWIC | Draw Desc | Image

12. Document ID: US 5231494 A

L3: Entry 12 of 18 File: USPT Jul 27, 1993

DOCUMENT-IDENTIFIER: US 5231494 A
TITLE: Selection of compressed television signals from single channel allocation based on viewer characteristics

Detailed Description Paragraph Right (18):
Coefficient normalization is a process that introduces small changes into the image in order to improve coding efficiency. This is done by truncating the DCT coefficients to a fixed number of bits. The truncation is performed by shifting a coefficient from left to right, spilling the least significant bits off the end of its register. In this way, the amplitude of the coefficient is also reduced. The number of bits remaining are preassigned individually for each of the 8.times.8 coefficients. However, the number of bits can be further reduced or increased as necessary to maintain a constant bit rate.

13. Document ID: US 5079621 A

L3: Entry 13 of 18 File: USPT Jan 7, 1992

DOCUMENT-IDENTIFIER: US 5079621 A
TITLE: DCT transform compression, transmission and recovery of digital color using virtual filtering mechanism

Brief Summary Paragraph Right (5):
In accordance with the present invention, the benefits of using a model of the human visual system to normalize the transform coefficients of the DCT operator for a monochromatic image are extended to a color image signal processing, without having to actually perform filtering and subsampling, so that the above mentioned hardware penalty is not imposed on the signal processor. In particular, the present invention is directed to a mechanism which employs a contrast sensitivity function (CSF) model of the human visual system for color images, to derive normalization values to be used in the compression of chromatic components, as well as the achromatic component, of the color imagery data. The CSF model is defined in terms of a color space transform, the chromatic channels of which have a bandwidth that is considerably less than that of the RGB signal components, so that the transformed signals conform with the band-limited sensitivity of the visual system. In particular, the color transform is defined by a transform coordinate system containing achromatic (A), deuteranopic (D) and tritanopic (T) axes. Advantageously, the coefficients of the transform for obtaining the ADT components from the RGB signals employs a set of conversion coefficients, absolute values of which are related to one another in powers of two, so that the original RGB signals can be transformed into the ADT color space by reduced complexity logic operators (shift and add).

Detailed Description Paragraph Right (10):
As pointed out briefly above, like the normalization mechanism employed in the '761 patent, the present invention employs a model of the human visual system to normalize each array of transform coefficients. However, unlike the patented scheme, the signal processing mechanism of the present invention normalizes the DCT coefficients in accordance with a `weighted` CSF model of the human visual system, which effectively performs a low pass filtering of the chromatic channels (the D and T components) of the input color imagery data. This low pass filterweighting of the normalization values produced by normalization array generator 42 yields an array of normalized DCT coefficients which effectively blur the image and reduce the entropy in the chromatic channels. Namely, the low-pass weighting of the bandwidth limited chromatic channels of the CSF model for generating the normalization array in the transmitter's compression mechanism effectively operates as a `virtual filter` that blurs the image, so that the effect of subsampling is accomplished, without actually having to perform the subsampling.

Detailed Description Paragraph Right (30):
As will be appreciated from the foregoing description, the present invention successfully extends the benefits of using a low pass `weighted` chromatic CSF model of the human visual system to normalize the transform coefficients of the DCT operator to color image signal processing, without having to actually perform subsampling, so that a hardware penalty is not imposed on the signal processor. Since the CSF model is defined in terms of a color space transform, the chromatic channels of which have a bandwidth that is considerably less than that of the RGB signal components, the transformed signals conform with the band-limited sensitivity of the visual system. In addition the transform conversion coefficients are related to one another in powers of two, so that RGB signals can be transformed into ADT color space by reduced complexity logic operators.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

14. Document ID: JP 2000152241 A

L3: Entry 14 of 18 File: JPAB May 30, 2000

DOCUMENT-IDENTIFIER: JP 2000152241 A
TITLE: METHOD AND DEVICE FOR RESTORING COMPRESSED MOVING IMAGE FOR REMOVING BLOCKING AND RING EFFECTS

Abstract (2):
SOLUTION: On the basis of a center source pixel f(i, j), f(i, j-1) is a left adjacent pixel, f(i, j+1) a right adjacent pixel, f(i-1, j) an upper adjacent pixel, and f(i+1, j) a lower adjacent pixel. Here, (i) and (j) are position information on the respective pixels. Cost functions having directivity are defined by pixels to be decoded and normalization parameters are found according to the cost functions; and the pixels to be decoded are found by applying values which are actually usable to the normalization parameters and processed by discrete consine transform(DCT), and then projection and reverse DCT are performed to restore an image similar to the source pixel.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

15. Document ID: JP 09135383 A

L3: Entry 15 of 18 File: JPAB May 20, 1997

DOCUMENT-IDENTIFIER: JP 09135383 A
TITLE: METHOD FOR MEASURING VISUAL FIELD BY IMAGE PROCESSING AND ITS DEVICE

Abstract (2):
SOLUTION: A frame image signal in an image memory 2 is given to an index/background part density calculation section 4, in which an average density of each index and a background is obtained. A contrast calculation section 5 obtains the contrast (c) between the index and its background by using the average density. Then a distance characteristic is obtained by a calculation section 6 based oh plural contrast values, and then the relation between the logarithm of the contrast (c) and an observation distance (d) is expressed in a linear function. Then a normalizing parameter calculation section 9 calculates parameters for normalizing processing of an image whose density is to be converted so that the calculated contrast and attenuation coefficient do not include the effect of the automatic aperture by selecting switches 7, 8 by a command from a switch control section 10.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

16. Document ID: JP 09042915 A

L3: Entry 16 of 18 File: JPAB Feb 14, 1997

DOCUMENT-IDENTIFIER: JP 09042915 A

TITLE: HOLE POSITION DETECTING DEVICE

Abstract (2):
SOLUTION: A prospective center checking device 5 detects a prospective position for a center point at which a screw hole is located, with the use of a previously registered reference pattern from an image picked up by a TV camera 2, and with the use of a process for obtaining a normalized correlating coefficient at each position. An image converting device 6 rearranges image data existing along radial directions from the prospective center point for every direction in accordance with a distance from the prospective center point so that image transformation is made. An image projecting device 7 prepares a projecting distribution, and an edge detecting device 8 detects a position where the intensity varies, in each direction from the prospective center position in accordance with an image created through the image transformation. Further a center position detecting device 9 detects the center position of the hole in accordance with the projecting distribution prepared by the image projecting device 7, and the edge position detected by the edge detecting device 8.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

☐ 17. Document ID: KR 304897 B, JP 2000152241 A, KR 2000031053 A, KR 2001009660 A, KR 287529 B

L3: Entry 17 of 18 File: DWPI Nov 1, 2001

DERWENT-ACC-NO: 2000-435312
DERWENT-WEEK: 200238
COPYRIGHT 2002 DERWENT INFORMATION LTD

TITLE: Decompression procedure for moving image, involves converting normalization parameter into analogous parameter using compressed pixel for obtaining decompression pixel.

Basic Abstract Text (4):
ADVANTAGE - The quality of compressed image and the speed of decompression process are improved as the normalization parameter is converted into analogous parameter using the compressed pixel and the decompression pixel is obtained reliably. The computation time and the calculation quantity are reduced as the analogous value corresponding to the actual pixel value is obtained and the projective test, the repeating method are not performed.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

☐ 18. Document ID: JP 11352617 A

L3: Entry 18 of 18 File: DWPI Dec 24, 1999

DERWENT-ACC-NO: 2000-120812
DERWENT-WEEK: 200013
COPYRIGHT 2002 DERWENT INFORMATION LTD

TITLE: Image normalization processing apparatus in radiation image information reader for diagnosing lesion or trauma - has image acceptance unit which performs normalization of image data received from reading side after determining normalization process conditions

Basic Abstract Text (1):
NOVELTY - A reading side determining unit (14) determines normalization process

conditions (J1) of image data (D1) read by a reader (12). An image acceptance side determining unit determines the normalization process conditions of the image data output from the apparatus (10), based on which the normalization of the image data is performed by an executing unit (20). DETAILED DESCRIPTION - An image acceptance side unit (20) is connected with an image reading unit (10). An INDEPENDENT CLAIM is also included for an image normalization process.

Basic Abstract Text (3):
ADVANTAGE - As the normalization is performed based on the normalization process conditions determined from the image data, the normalization process conditions are changed suitably in the image acceptance side apparatus, thereby building of medical network system with sufficient versatility can be performed. DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of image normalization processing system. (2) Image reader; (10) Image reading side; (14) Reading side determining unit; (20) Image acceptance side; (26) Executing unit on receiving side; (J1) Normalization process conditions; (D1) Image data.

Generate Collection | Print

Term	Documents
IMAG$3	0
IMAG.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	881
IMAGA.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	20
IMAGAE.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	13
IMAGAES.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	4
IMAGAGE.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	4
IMAGAKI.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	39
IMAGAMA.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	33
IMAGAMI.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	19
IMAGANT.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	1
IMAGAR.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	1
(IMAG$3 WITH ((PROCESS$3 OR SYSTEM OR MEANS OR METHOD) NEAR2 NORMALIZ$7 NEAR2 (CONDITION$3 OR CRITERION$3 OR COEFFICIENT$3 OR PARAMETER$3))).USPT,PGPB,JPAB,EPAB,DWPI,TDBD.	18

There are more results than shown above. Click here to view the entire set.

Display Format: - Change Format